Important Safety Warnings

This manual contains instructions and warnings that should be followed during the installation, operating and storage of the UPS system. Please keep this manual for further reference.

CAUTION! To prevent the risk of fire or electric shock, install in a temperature and humidity controlled indoor area free of conductive contaminants. (See the specifications for the acceptable temperature and humidity range.)
CAUTION! To reduce the risk of overheating the UPS, do not cover the UPS' cooling vents and avoid exposing the unit to direct sunlight or installing the unit near heat emitting appliances such as space heaters or furnaces.
CAUTION! Do not attach non-computer-related items, such as medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to UPS.
CAUTION! Do not plug the UPS input into its own output.
CAUTION! Do not allow liquids or any foreign object to enter the UPS. Do not place beverages or any other liquid-containing vessels on or near the unit.
CAUTION! In the event of an emergency, press the OFF button and disconnect the power cord from the AC power supply to properly disable the UPS.
CAUTION! Do not attach a power strip or surge suppressor to the UPS.
CAUTION! If the UPS is with metal chassis, for safety purpose, grounding is a must during UPS installation in order to reduce leakage current below 3.5mA.
Attention hazardous through electric shock. Also with disconnection of this unit from the mains, hazardous voltage still may be accessible through supply from battery. The battery supply should be therefore disconnected in the plus and minus pole at the quick connectors of the battery when maintenance or service work inside the UPS is necessary.
CAUTION! Servicing of batteries should be performed or supervised by personnel knowledgeable of batteries and the required safety precautions. Keep unauthorized personnel away from batteries.
CAUTION! When replacing the batteries, use the same number and type of batteries.
CAUTION! Internal battery voltage is 12VDC. Sealed, lead-acid, 6-cell battery.
CAUTION! Do not dispose of batteries in a fire. The battery may explode. Do not open or mutilate the battery or batteries. Released electrolyte is harmful to the skin and eyes.
CAUTION! Unplug the UPS prior to cleaning and do not use liquid or spray detergent.
CAUTION! A battery can present a risk of electric shock and high short circuit current. The following precaution should be observed before replacing batteries:

1) Remove watches, rings, or other metal objects.
2) Use tools with insulated handles.
3) Wear rubber gloves and boots.
4) Do not lay tools or metal parts on top of batteries.
5) Disconnect charging source prior to connecting or disconnecting batteries terminal.

PowerStar Extreme User Manual

Uninterruptible Power Supply

Specifications

MODEL	650	650 Smart	1K Smart
CAPACITY	650 VA / 360 W	650 VA / 360 W	1000 VA /500 W
INPUT			
Input Voltage	220/230/240 VAC		
Voltage Range	140-300 VAC		
OUTPUT			
Voltage Regulation	+/-10%		
Transfer Time	Typical 4-8 ms, 13 ms max.		
Waveform	Simulated Sine Wave		
BATTERY			
Type & Number	12 V/7 AH x 1		12 V/7 AH x 2
Charging Time	4-6 hours recover to 90% capacity		
PHYSICAL			
Dimension (DxWxH) mm	287 x 100 x 142		350 x 146 x 160
Net Weight (kgs)	4.25		8.9
MANAGEMENT			
USB/RS-232 Port (option)	-	USB Port	USB Port
	Supports Windows® 98/2000/2003/XP/Vista/2008/7, Linux, Unix, and MAC		

Installation & Operation

❶ Initial Set-up

After unpacking the unit, please avoid placing the unit in direct sun light, excessive heat, excessive humidity or in contact with fluids of any type. Place the unit away from other equipment at least 20 cm to avoid interference.

Place the unit to avoid:

- Direct sunlight
- Excessive heat
- Excessive humidity or contact with fluids

❷ Connect Utility

Plug the UPS into an electrical outlet that does not share a circuit with a heavy electrical load. Please allow the UPS to charge at least 6 hours prior to use.

❸ Connect Equipment

Connect critical equipment to "Battery Backup Sockets". These battery backup sockets provide battery back-up and surge protection. In case of power outage, battery power is automatically provided to these outlets. Connect minor less critical devices to "Surge Protected Socket". Power is not supplied to this socket when the utility fails.

NOTE: Please DO NOT connect scanner or printer into "Battery Backup Sockets".

❹ Connect Com. Port and Install Software (Only available for the SMART models with USB/RS-232 ports)

Connect the communication port cable end to the communication port located on the rear panel of the UPS. Connect the other end of communication port cable to the port on the rear panel of the computer.

Download the software from http://www.power-software-download.com/viewpower.html.

Follow on-screen instruction to install the monitoring software.

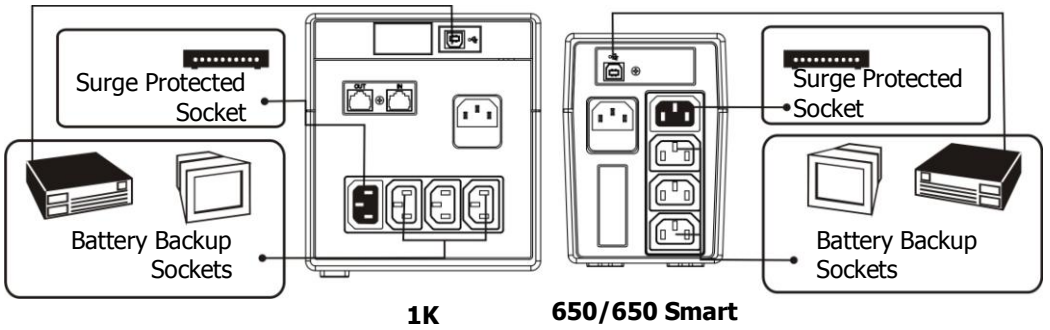
❺Connect Modem/Phone/Network for Surge Protection (Only for the models with RJ-45)

Connect a single modem/phone line into surge-protected "IN" outlet on the back panel of the UPS unit. Connect from "OUT" outlet to the computer with another phone line cable.

❻Power On/Off UPS

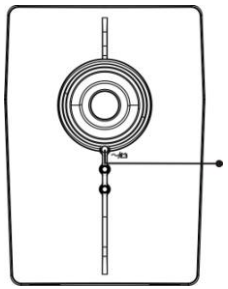
Press power switch on the front panel of the UPS to turn on UPS. Press switch again to turn off the UPS.

Connection Chart

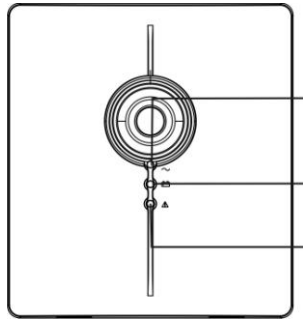


1K **650/650 Smart**

Status Indicator



UPS status LED
AC Mode: green lighting
Battery Mode: green flashing



Battery mode LED: yellow lighting
AC mode LED: green lighting
Fault LED: red lighting

Troubleshooting

Problem	Possible Cause	Solutions
No LED display on the front panel.	Low battery.	Charge the UPS at least 6 hours.
	Battery fault.	Replace the battery with the same type of battery.
	The UPS is not turned on.	Press the power switch again to turn on the UPS.
Alarm continuously sounds when the mains is normal.	The UPS is overload.	Remove some loads first. Before reconnecting equipment, please verify that the load matches the UPS capability specified in the specs.
When power fails, back-up time is shorten.	The UPS is overload.	Remove some critical load.
	Battery voltage is too low.	Charge the UPS at least 6 hours.
	Battery defect. It might be due to high temperature operation environment, or improper operation to battery.	Replace the battery with the same type of battery.
The mains is normal but green LED is flashing.	Power cord is loose.	Reconnect the power cord properly.